

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 1 has been amended to further recite that each screw of the twin screw extruder has a kneading portion including kneading elements other than a screw, and a screw portion having a screw. Basis for this is shown in Figure 2. It is respectfully submitted that one skilled in the art would recognize that the portion of the screw in Figure 2 having flat plates is a kneading portion. See, e.g., Figure 1b, and lines 49-50 of column 2, in U.S. patent 6,613,128.

Applicants wish to thank Examiner Wollschlager for the courtesy of an interview on July 22, 2010, at which time the present application was discussed, particularly with reference to the presently amended Claim 1. At the conclusion of the interview, the Examiner indicated that amended Claim 1 has support in the original disclosure and appears to overcome the prior art of record. The new matter rejection was also discussed.

Concerning the new matter rejection, Applicants herein traverse this rejection. As was discussed during the interview, the amendment of Table 1 to change the characterization of Example 2 to be a "comparative example" did not alter the data of Table 1. The revised characterization of Example 2 as a comparative example does not comprise new matter since Example 2 is disclosed as being outside of the bounds of the claimed invention, i.e., the kneading volume proportion in this example is 80%. Thus, the change in the characterization of Example 2 is inherent in the disclosure and was required for consistency with the amended claim scope.

Claims 1-4 and 6-14 were rejected under 35 U.S.C. §103 as being obvious over Ford et al in view of JP '174 or JP '023. According to the Office Action, Ford et al teaches all of the claimed features other than producing a ceramic sheet with a thickness of between 1 and 10 millimeters, but that this would have been obvious in view of JP '174 or JP '023.

With respect to the claim recitation whereby the kneading portion of the twin screw extruder occupies from 30-70% volume of the twin screw extruder, it was the position of the Office Action that the broadest reasonable interpretation of this limitation would read on Ford et al since all portions of an extruder rotor perform some kneading. On the other hand, it was agreed during the interview that amended Claim 1 overcame this interpretation and similarly overcame the applicability of Ford et al to teach this feature of the claims.

Moreover, as was also discussed during the interview, the specification provides evidence of criticality for the 30-70% range of the kneading portion of the twin screw extruder. In particular, page 10 of the specification describes that a proportion less than 30% provides insufficient kneading and a proportion greater than 70% results in lower product quality. This is confirmed by the comparative example 2 of Table 1, which had a kneading proportion of 80% and failed to produce the highest level of cracking resistance. See, e.g., Table 4 wherein the crack designation “2” for Example 2 is inferior to the designation “3.” See also lines 5-14 of page 36. Since the kneading proportion providing this improved result is not taught in the art to be a result effective variable in the art, i.e., the art does not teach that selecting a particular proportion of the kneading portion will reduce cracking, this represents an unpredictable improved result and is evidence of unobviousness. In view of the above, it was agreed at the conclusion of the interview that the amended claims overcome this prior art.

Claims 1-4 and 6-14 had also been rejected under 35 U.S.C. §103 as being obvious over Tsuruta in view of Ford et al., Rosato or McCullough et al. Here again, however, it was agreed that the clarification of what is meant by the “kneading portion” also overcomes this prior art.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early notice of allowability.

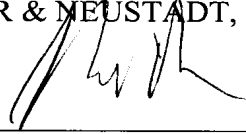
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